UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,236	09/25/2003	Leo S. Chang	019022-000510US	8703

62204 7590 01/03/2008 GE TRADING & LICENSING 1 RESEARCH CIRCLE ATTN: BRANDON, K1 - 2C11 NISKAYUNA, NY 12309	**EXAMINER** VO, LILIAN

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2195	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Office Action Summary	Application No.	Applicant(s)
		10/672,236	CHANG ET AL.
		Examiner	Art Unit
		Lilian Vo	2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 November 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1 - 23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1 - 23</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20071221

DETAILED ACTION

1.   Claims 1 – 23 are pending.

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible

for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been

timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR

1.114. Applicant's submission filed on 11/26/07 has been entered.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1- 7, 11, 16-19, and 22-23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Burd et al. (Patent Application Publication 2005/0050164, hereinafter Burd) in

view of Forkner et al. (Patent Application Publication 2003/0120722, hereinafter Forkner).

5.   As per **claim 1**, Burd teaches the invention as claimed, including a computer

system for optimizing processing of an annotation request from a client, comprising:

a request processor for receiving said annotation request from said client (fig. 2), to query

a memory to find relevant information corresponding to said annotation request (page 5

paragraph 92), and to break said annotation request down into a plurality of constituent tasks if

said relevant information is not found (fig. 2, fig. 6: 602 – 620, page 4 paragraph 37);

a thread-controlling means for maintaining a plurality of threads (fig. 2: 204, page 2

paragraph 17, page 4 paragraph 37, page 4 paragraph 39, page 5 paragraph 45);

an assigning means for assigning said plurality of threads to said plurality of constituent

tasks (fig. 2: 206 – 208, page 2 paragraph 17, page 4 paragraph 37, page 4 paragraph 39 – 40,

page 5 paragraph 45); and

task execution means for concurrently executing the plurality of constituent tasks in the

respective plurality of threads to completion on the request processor (page 4 paragraph 39 – 40,

page 5 paragraph 45, page 7 paragraph 76, page 9 paragraph 86).

Burd discloses that the state information related the objects which was created for

executing the task is being retrieved from the memory by the server in response to the receiving

of client request (page 9 paragraph 92) and that control objects in the control object hierarchy are

created and executed on the server which also cooperate to handle postback input from the http

request, to manage the states of server side control objects, to perform data binding with server

side databases, and to generate authoring language data used to display a resulting web page at

the client (page 5 paragraph 45 and page 7 paragraph 76). It would have been obvious for one of

an ordinary skill in the art, at the time the invention was made, to recognize that Burd's invention

suggests the processing of the request including the step of breaking the request into a plurality

of constituent tasks if the relevant information corresponding to the request is not found when

that control objects in the control object hierarchy are created and executed on the server which also cooperate to handle postback input from the http request, to manage the states of server side control objects, to perform data binding with server side databases, and to generate authoring language data used to display a resulting web page at the client (page 5 paragraph 45 and page 7 paragraph 76).

Forkner teaches the invention as claimed, including a task queue for storing a plurality of constituent tasks that need to be performed for said annotation request (page 3 paragraph 32, fig. 3: 64). It would have been obvious to one of ordinary skill in the art to combine Forkner and Burd, to include a task queue so additional tasks can be held at the server, thereby increasing the parallel processing capabilities of the system.

6.   As per **claim 2**, as modified Burd teaches the invention as claimed, including a computer system according to claim 1, wherein said plurality of threads is independent from said plurality of constituent tasks stored in said task queue (Burd: page 5 paragraph 45 and page 7 paragraph 76).

7.   As per **claim 3**, as modified Burd teaches the invention as claimed, including a computer system according to claim 1, wherein said plurality of threads is persistent (Burd: page 4 paragraph 40. Forkner: page 3 paragraph 35).

8.   As per **claim 4**, as modified Burd teaches the invention as claimed, including a computer system according to claim 1, wherein said plurality of constituent tasks is arranged in a

substantially first-in-first-out basis within said task queue (Burd: page 9 paragraph 86 and fig. 6. Forkner: 3).

9.   As per **claim 5**, as modified Burd teaches the invention as claimed, including a computer system according to claim 1, wherein when a thread is available for assignment, said thread is. assigned to a constituent task when said constituent task is ready for execution (Burd: fig. 2: 206 – 208, page 2 paragraph 17, page 4 paragraph 37, page 4 paragraph 39 – 40, page 5 paragraph 45).

10.   As per **claim 6**, as modified Burd teaches the invention as claimed, including a computer system according to claim 5, wherein said assigned thread is released upon conclusion of said constituent task (Burd: page 4 paragraph 40).

11.   As per **claim 7**, as modified Burd teaches the invention as claimed, including a computer system according to claim 1, wherein said plurality of constituent tasks includes checking a cache to determine whether information pertaining to said annotation request is present in said cache (Forkner: page 2 paragraph 18 - 19).

As Forkner teaches the persistent process may be useful to manipulate large amounts of data quickly and efficiently for incoming requests by building large memory caches that do not need to be destroyed, Forkner inherently must check the cache to determine if information pertaining to that request is present in the cache. It would have been obvious to one of ordinary skill in the art to combine Burd and Forkner since allowing information related to the request to

be stored in cache would significantly increase performance by saving the processing time of

looking up the information regarding the request each time it is executed. Retrieval from

persistent memory or from the disk is an expensive and time-consuming operation. To store

request information in cache would greatly reduce pre-processing overhead.

12.   As per **claim 11**, as modified Burd teaches the invention as claimed, including a

computer system according to claim 1, wherein said plurality of constituent tasks includes

updating a cache with annotated information (Burd: page 11 paragraphs 103 and 109).

13.   As per **claims 16 - 19 and 22 - 23,** similar limitations are presented as those in claims 1 -

3 and 6. It is noted that in claim 16, the tasks are referred to as "requisite tasks" as opposed to

"constituent tasks." However, as Burd is related to process client requests, it can safely be

assumed that all tasks to be performed in the system will be subject to be processed as required.

As such, an operating system thread must be allocated as well as I/O threads and other such

essential, i.e. "requisite" system threads. Since these are required for the successful operation of

the system, it follows that Burd covers requisite tasks as well as constituent tasks.

14.   Claims 8 - 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burd et al.

(Patent Application Publication 2005/0050164) in view of Forkner et al. (Patent Application

Publication 2003/0120722) as applied to claim 1 above, and further in view of Bauer (USPN

5,877,759).

15.   As per **claims 8 - 9**, Bauer teaches the invention as claimed, including a computer system

according to claim 1, wherein said plurality of constituent tasks includes retrieving information

pertaining to said annotation request from one or more sources, wherein said one or more sources

include the Internet (col. 7 lines 45 - 57). It would have been obvious to one of ordinary skill in

the art to combine as modified Burd with Bauer since Bauer provides a way of ensuring that the

it against another information regarding a task is completely up to date by checking resource. In

this way, the most accurate results are obtained.

16.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burd et al.

(Patent Application Publication 2005/0050164) in view of Forkner et al. (Patent Application

Publication 2003/0120722) as applied to claim 1 above, and further in view of van Hoff (USPN

5,822,539, hereinafter Hoff).

17.   As per **claim 10**, van Hoff teaches the invention as claimed, including a computer system

according to claim 1, wherein said plurality of constituent tasks includes annotating a retrieved

web page with additional hyperlinks (col. 5 lines 26 - 55). It would have been obvious to one of

ordinary skill in the art to combine as modified Burd with Hoff as Internet use for commercial

purposes is ever increasing, such that providing information to a user pertaining to resources the

user is interested in has a marketable benefit. Hoff provides a way of supplementing as modified

Burd by providing a function may result in a gain in revenue.

18.   Claims 12 - 15 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Burd et al. (Patent Application Publication 2005/0050164) in view of Forkner et al. (Patent

Application Publication 2003/0120722) as applied to claim 1 above, and further in view of Spix

et al. (USPN 5,179,702) (hereinafter Spix).

19.   As per **claim 12**, Spix teaches the invention as claimed, including a computer system

according to claim 1, further comprising:

an I/O queue for storing a plurality of I/O tasks identified from said plurality of

constituent tasks, wherein said plurality of I/O tasks only perform input and/or output functions

(col. 15 lines 3-27).

It would have been obvious to one of ordinary skill in the art to combine as modified

Burd with Spix since Spix shows how to achieve full functionality of a multithreaded system.

The system must be able to perform I/O operations as well as run an operating system while

performing the claimed annotation. In this sense, Spix provides a way of queuing I/O tasks in a

way that the system can perform input and output functions without interrupting the operating

system functions.

20.   As per **claim 13**, as modified Burd teaches the invention as claimed, including' a

computer system according to claim 12, wherein two or more of said plurality of I/O tasks are

executed in a parallel manner (Spix: col. 14 line 61 - col. 15 line 2).

21.   As per **claim 14**, as modified Burd teaches the invention as claimed, including a

computer system according to claim 12, wherein said task queue is notified upon completion of

each of said plurality of I/O tasks (Heimsoth: col. 25 lines 5-12).

22.   As per **claim 15**, the examiner takes an "Official Notice" that a computer system

according to claim 14, wherein upon said notification one or more of said plurality of constituent

tasks which require results from said executed I/O tasks are rendered ready for execution is

considered well known and expected feature in the art. Therefore, it would have been obvious to

one of ordinary skill in the art at the time the invention was made to include this feature such as

to wait until a specific task has completed due to data dependencies and other related

dependencies to as modified Burd to satisfy the execution order.

23.   As per **claims 20 – 21**, similar limitations are presented as those in claims 12 – 13 and 15.

Response to Arguments

24.   Applicant's arguments with respect to claims 1 - 23 have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

25.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The

examiner can normally be reached on Thursday 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

                                        Lilian Vo
                                        Examiner
                                        Art Unit 2195

lv
December 21, 2007

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